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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,710	03/13/2000	HANNU JUHANI LEINO	32107	1287

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EXAMINER	
ALVO, MARC S	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 01/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/445,710	LEINO ET AL.
	Examiner	Art Unit
	Steve Alvo	1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 20 December 2003 .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-13 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-13 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

The Final Rejection of 9/10/2003 is withdrawn and the following action given:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over OSTBERG et al with or without G.B. Patent 815,527 with or without PLAKSON et al.

OSTBERG et al teaches adding alkali and carbon dioxide to counter each other's pH changing effect. See page 515, first paragraph for adding alkali, e.g. sodium hydroxide, to the pulp to adjust the pH in combination with carbon dioxide to buffer the pH to a pH of 8.0. See page 512, second paragraph for treating bleached or unbleached sulphate pulp. See page 509, middle of page for "CO2 gas" dissolved. It would have been obvious to that the alkali of OSTBERG et al could have been an aqueous solution of sodium hydroxide, as such is taught by G.B. Patent 815,527. G.B. Patent 815,527 further teaches that the sodium hydroxide could be added prior to the carbon dioxide (page 2, lines 35-41). Claim 9 is rejected, as the use of pipes to add chemicals is well known in the papermaking art. PLAKSON et al teaches adding carbon dioxide and alkali to a stock preparation system to control the pH to 7.0 to 9.0, preferably 8.0. If necessary it would have been obvious to control the pH of OSTBERG et al to between 7.0 to 9.0, e.g. to 8.0, during the stock preperation as such is taught by PLAKSON et al.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over OSTBERG et al with or without G.B. Patent 815,527 with or without PLAKSON et al as applied to claim 1 above, and further in view of ADMITTED PRIOR ART (specification, page 1, lines 6-11).

The ADMITTED PRIOR ART teaches that it is known to neutralize (pH 7-8.5) the pulp before adding calcium carbonate as filler. It would have been obvious to one of ordinary skill in the art that the neutralized pulp of OSTBERG et al and/or G.B. Patent 815,527 could have the calcium carbonate of the ADMITTED PRIOR ART added to it as it is at the proper pH for calcium carbonate filler.

The Declarations of Ostberg and Leino indicate that the OSTBERG reference uses either carbon dioxide or alkali. However, one skilled in the art would, from the teachings of OSTBERG et al (top of page 515) that it would have been obvious to add both CO2 and sodium hydroxide (charge of alkali) to regulate the pH of the pulp. OSTBERG et al teaches that the pH of the pulp was 9.0-9.5 before the addition of the carbon dioxide. It then states that even though a lower pH would have been preferable the pH is controlled by the addition of alkali. Clearly the pH of 9.0 to 9.5 is controlled with the use of alkali. OSTBERG et al further states that the addition of carbon dioxide started the buffering capacity, which made the ph level stable at a pH of 8.0. One skilled in the art would understand this to mean that the CO2 was added after the alkali. Such addition of sodium hydroxide and CO2 reads on the claimed "adding thereto a combination of an alkali metal hydroxide feed and a carbon dioxide feed". The claimed feeds of (1) CO2 and (2) alkali metal hydroxide do not define over the combination of feeds claimed by Applicant. Even if OSTBERG et al does not teach addition of alkali, OSTBERG et al teaches buffering papermaking pulp with CO2 at a pH of 8.0. The British Patent teaches that

papermaking pulp can be buffered to a pH of below 9.0, preferably between 5 and 9 by forming sodium bicarbonate in *situ* by adding carbon dioxide and sodium hydroxide to the pulp. OSTBERG et al teaches buffering alkaline pulp to 8.0 with carbon dioxide. It would have been obvious to buffer the pulp of OSTBERG by adding sodium hydroxide and carbon dioxide to the pulp as taught by the British Patent. It would have been prima facie obvious to use the buffering system of the British Patent in the process of OSTBERG et al to obtain the buffering taught by OSTBERG et al.

The argument that OSTBERG et al does not control the pH throughout the paper making is not convincing. The claims call for maintaining the pH at the desired level from the addition of the feeds through the formation of the paper on the paper machine. OSTBHERG et al teaches controlling the pH in the paper machine, see page 515, first paragraph, and the last sentence before the list of "Reference".

The argument that the present invention adds alkali metal hydroxide and a carbon dioxide regardless of the pulp suspension's initial pH is not convincing, as the claimed pH does not differ from the pH of OSTBERG et al. For example, claim 2 calls for adjusting the pH to a pH of 7 to 9. The buffering pH of 8 disclosed by OSTBERG et al is within the claimed 7 to 9. Applicant has not claimed or disclosed an initial pH that differs from the initial pH of OSTBERG et al. Besides claim 1 was not call for any particular pH. OSTBERG et al teach the maintaining of the pH through the use of CO2 buffer. Bgesides controlling the pH during stock preparation to between 7.0 to 9.0 would have been obvious from the teachings of PLAKSON et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Alvo whose telephone number is 571-272-1185. The examiner can normally be reached on 6:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1700.

Steve Alvo
Primary Examiner
Art Unit 1731

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